

# **More than No-take Marine Reserves: Planning for Diversity of Small-scale Fisheries Management Strategies**

Rebecca Weeks, James Cook University

## **Abstract**

Spatial planning for coral reef fisheries management has, to date, focused almost exclusively on the design and implementation of 'no-take' marine reserves and reserve networks. However, few no-take marine reserves are well managed or adequately enforced, most are very small, and in many regions there exists a local tradition or preference for alternative management strategies. For example, in the Western Pacific, a diversity of different management strategies are employed within locally managed marine areas, including periodically harvested fisheries closures (PHCs), rotational closures, gear, species, and access restrictions. In Fiji, there are just a handful of permanent no-take marine reserves but hundreds of PHCs. PHCs evolved primarily to serve socio-cultural objectives: communities traditionally closed fishing grounds following the death of a respected community member and then reopened the area to harvest fish for the funeral. In contemporary use however, PHCs are often expected to achieve a wide range of objectives, including maximising yields in the short-term, boosting fisheries sustainability in the long-term, and contributing towards conservation goals. It remains unclear whether PHCs can achieve any or all of these objectives simultaneously, or what factors might be critical to their success. Spatial plans that employ locally preferred management strategies and give primacy to local objectives are likely to have greater compliance, and subsequently increased effectiveness for a range of objectives, including biodiversity conservation. Yet at present, the ability of regional-scale conservation plans to effectively inform local management is constrained by insufficient understanding of the relative effectiveness of different management strategies, and fishers' preferences for these. I will outline research working towards improving this understanding, to provide guidance on how best to design and implement PHCs to achieve multiple objectives, and how to account for local management preferences in spatial planning.